Seven New Combinations in the Florida Flora

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ABSTRACT. Some nomenclatural amendments caused by taxonomic revision in Asteraceae and Poaceae will be adopted for the flora of Florida. Therefore, the new combinations *Carphephorus odoratissimus* var. *subtropicanus* (DeLaney et al.) Wunderlin & B. F. Hansen, *Symphyotrichum carolinianum* (Walter) Wunderlin & B. F. Hansen, *Symphyotrichum sericeum* var. *microphyllum* (DC.) Wunderlin & B. F. Hansen, *Symphyotrichum concolor* var. *plumosum* (Small) Wunderlin & B. F. Hansen, *Dichanthelium nudicaule* (Vasey) B. F. Hansen & Wunderlin, *Urochloa fusca* (Swartz) B. F. Hansen & Wunderlin, and *Urochloa fusca* var. *reticulata* (Torrey) B. F. Hansen & Wunderlin are proposed for Florida taxa.

Key words: Asteraceae, *Carphephorus*, *Dichanthelium*, Florida, North America, Poaceae, *Symphyotrichum*, *Urochloa*.

In the process of preparing a revised edition of the *Guide to the Vascular Plants of Florida* (Wunderlin, 1998), the following four new combinations in the Asteraceae and three in Poaceae were found to be necessary.

ASTERACEAE

Carphephorus odoratissimus (J. F. Gmelin) Hebert var. **subtropicanus** (DeLaney, N. Bissett & Weidenhamer) Wunderlin & B. F. Hansen, comb. nov. Basionym: *Carphephorus subtropicanus* DeLaney, N. Bissett & Weidenhamer, Bot. Explor. 1: 2. 1999. TYPE: U.S.A. Florida: Polk Co., 4.36 mi. E of US Hwy. 27 on Avon Park Cut-off Rd., T32S, R27E, Sec. 21, SE 1/4, 6 Oct. 1999, *N. Bissett 1001* (holotype, USF; isotypes, FLAS, FSU, FTG, GA, NY, USF).

The characteristic fragrant, vanilla-like odor of dried leaves from the common Atlantic and Gulf Coastal plain *Carphephorus odoratissimus* (vanilla-leaf) is produced by the chemical coumarin. It has been noticed by several field botanists that the southern peninsular Florida material usually assigned to this taxon lacks this aromatic feature found in the typical northern form. Small (1933) suggested that there may be two species involved. On the basis of chemistry, morphology, range, and slightly divergent phenology, DeLaney et al. (1999) proposed that the southern Florida plants should be considered as a distinct species, *C. subtropicanus*. Although the presence or absence of coumarin along with the growth habit (*C. subtropicanus* is a generally smaller, more rosulate plant with its inflorescence little-ramified, while the larger, leafy-stemmed *C. odoratissimus* has a much-branched inflorescence) generally separates *C. odoratissimus* from *C. subtropicanus*, there is a slight overlap in morphology, especially in the central peninsula where the ranges of the two species overlap. Also, in consideration of the distinctiveness of the other Florida species of *Carphephorus*, it seems best to treat *C. subtropicanus* at the varietal level.

Representative specimens. U.S.A. **Florida:** Citrus Co., along FL 480, Chassahowitzka, 7 Oct. 1972, *Genelle & Fleming 1606* (USF); Collier Co., off FL 82 W of Immokalee, 25 Sep. 1964, *Lakela 27406* (USF); Hillsborough Co., about 7 mi. NE of University of South Florida Campus, N of Tampa, 15 Oct. 1961, *Lakela 24777* (USF); Martin Co., S of Salerno Junction off US 1 along W side of canal, 29 Sep. 1962, *Lakela 25383* (USF).

ASTER COMPLEX

The genus *Aster* in North America is currently undergoing extensive revision by Luc Brouillet, Guy Nesom, and John Semple. There is some consensus among these workers that the genus *Aster* probably does not occur in North America, but there is uncertainty as to how the North American species should be split up and which generic names apply. For the purposes of the Florida flora, five genera are being recognized: *Aster*, *Doellingeria*, *Ionactis*, *Sericocarpus*, and *Symphyotrichum*. The following three new combinations are needed.

Symphyotrichum carolinianum (Walter) Wunderlin & B. F. Hansen, comb. nov. Basionym: *Aster carolinianus* Walter, Fl. Carol. 208. 1788. *Lasallea caroliniana* (Walter) Semple & Brouillet, Amer. J. Bot. 67: 1023. 1980. *Virgulus carolinianus* (Walter) Reveal & Keener, Taxon 30: 650. 1981. *Ampelaster carolinianus* (Walter) G. L. Nesom, Phytologia 77: 250. 1994 [1995]. TYPE: U.S.A. South Carolina: without locality, s.d., *Herb. Walter s.n.* (holotype, BM photo seen).

The climbing aster has long been considered morphologically unique among the southeastern U.S. asters because of its clambering stems and clasping leaves, and is often recognized as the sole member of a section or subsection. It was first placed in the segregate genus *Lasallea* by Semple and Brouillet (1980) along with 11 other species more widespread in eastern North America. It was then transferred because of nomenclatural priority to the earlier generic name *Virgulus* by Reveal and Keener (1981). Most recently, the taxon was placed in the monotypic genus *Ampelaster* by Nesom (1995), who felt that its unique morphology and chromosome number ($x = 9$) placed it apart from the Virgulus group ($x = 5$). Based on chloroplast DNA evidence (Xiang & Semple, 1996), it is basal within the *Symphyotrichum* clade and seems therefore best included within *Symphyotrichum*.

Representative specimens. U.S.A. **Florida:** Collier Co., Fakahatchee Strand, N of Copeland, 7 Dec. 1974, *Wunderlin et al. 5350* (USF); Columbia Co., Ichetucknee State Park, 3 Nov. 1981, *Correll & Correll 53136* (USF); Hardee Co., 9.5 mi. E of Zolfo Springs at Charlie Creek bridge, 10 Nov. 1978, *Hansen 4892* (USF); Wakulla Co., 5.8 mi. N of St. Marks lighthouse, 8 Nov. 1963, *Ward & Ford 3604* (FLAS, USF).

Symphyotrichum sericeum (Ventenat) G. L. Nesom var. **microphyllum** (DC.) Wunderlin & B. F. Hansen, comb. nov. Basionym: *Aster sericeus* Ventenat var. *microphyllus* DC., Prodr. 5: 233. 1836. TYPE: U.S.A. Texas: "in Mexici dist. orientalis prov. Texas," Nov.–Dec. 1828, *Berlandier 1876* (holotype, G-DC microfiche seen).

Aster pratensis Rafinesque, Fl. Ludov. 67. 1817. *Lasallea sericea* (Ventenat) Greene subsp. *pratensis* (Rafinesque) Semple & Brouillet, Amer. J. Bot. 67: 1022. 1980. *Virgulus pratensis* (Rafinesque) Reveal & Keener, Taxon 30: 649. 1981. *Symphyotrichum pratense* (Rafinesque) G. L. Nesom, Phytologia 77: 290. 1994 [1995]. TYPE: U.S.A. Louisiana.

Aster ciliatus Nuttall, Trans. Amer. Philos. Soc., ser. 2. 7: 295. 1840; non *Aster ciliatus* Walter, Fl. Carol. 209. 1788; nec *Aster ciliatus* Muhlenberg ex Willdenow, Sp. Pl. 3: 2027. 1805. *Aster phyllolepis* Torrey & A. Gray, Fl. N. Amer. 2: 113. 1841. *Lasallea phyllolepis* (Torrey & A. Gray) Greene, Leafl. Bot. Observ. Crit. 1: 5. 1903. TYPE: U.S.A. Louisiana: Collector unknown (holotype, P[Hb. Durand] not seen.)

There is no type specimen for *Aster pratensis* Rafinesque nor for most of the other new names from his *Florula Ludoviciana.* A neotype should be designated, but that is somewhat beyond the scope of this paper.

This southeastern United States taxon has larger heads and less pubescent phyllaries than the typical variety. We follow Hatch et al. (1990) and Wunderlin (1998) in recognizing this entity at the varietal level rather than as a species (as *Symphyotrichum pratense*) as proposed by Nesom (1995), or as a subspecies (as *Lasallea sericea* subsp. *pratensis*) as proposed by Semple and Brouillet (1980).

In his protologue of *Aster ciliatus,* Nuttall cited a Louisiana specimen in the Durand Herbarium in Philadelphia by an unnamed or unknown collector. The herbarium of Elias Durand is now housed at Paris (Pennell, 1936); the type for this name should be sought there.

Representative specimen. U.S.A. **Florida:** Gadsden Co., E side of FL 269, 0.5 mi. S of railroad tracks (River Junction), 5 Oct. 1985, *Gholson 11507* (FLAS).

Symphyotrichum concolor (L.) G. L. Nesom var. **plumosum** (Small) Wunderlin & B. F. Hansen, comb. et stat. nov. Basionym: *Aster plumosus* Small, Bull. Torrey Bot. Club 51: 387. 1924. TYPE: U.S.A. **Florida:** Gadsden Co., Aspalaga, dry sandy soil, Oct. 1897, *Biltmore Herb. 36b* [*Chapman s.n.*] (holotype, NY microfiche seen).

This is distinguished from the autonymic variety of *Symphyotrichum concolor* only by its loosely spreading or recurved phyllaries. It is restricted to the Appalachicola River region of Gadsden, Liberty, Franklin, and Calhoun Counties of Florida, apparently in slightly wetter sites than the autonymic variety, which is common throughout Florida, the southeastern United States, and north along the coast to New York and Massachusetts.

Representative specimens. U.S.A. **Florida:** Calhoun Co., 9 mi. N of the Chipola River near FL 71, 10 Nov. 1962, *Clewell 736* (USF); Liberty Co., Forest Road 180 2 mi. from its jct. with FL 65 S of Wilma, Apalachicola National Forest, 4 Nov. 1987, *Godfrey 82607* (USF); along E side of FL 379, 0–0.3 mi. N of jct. with Forest Road 172, ca. 9 mi. NW of Sumatra and 4.2 air mi. W of Kern, 30°7′55″N, 85°3′20″W, 28 Oct. 1990, *Orzell & Bridges 15682* (USF).

POACEAE

Dichanthelium nudicaule (Vasey) B. F. Hansen & Wunderlin, comb. nov. Basionym: *Panicum nudicaule* Vasey, U.S.D.A. Div. Agrost. Bull. 8: 31. 1889. TYPE: U.S.A. Florida: Santa Rosa Co., swamps, May 1886, *Curtiss 3583** (lectotype, designated by Hitchcock & Chase (1910: 179), US microfiche seen; isolectotypes, NY microfiche seen, TAES not seen, US microfiche seen).

This name was lectotypified by Hitchcock and Chase (1910) by a clear citation of the Curtiss specimen as the type.

Hansen and Wunderlin (1988), in their synopsis of the Florida species of *Dichanthelium*, treated *Panicum nudicale* Vasey as a synonym of the widespread and variable *D. dichotomum* (L.) Gould. We now believe the taxon is distinct from *D. dichotomum*; the new combination is needed to accommodate it in *Dichanthelium*.

This species is found only along a small area of the Gulf Coast from Bay County, Florida, to southeastern Mississippi. It is separable from *Dichanthelium dichotomum* by its wide, ascending, mostly basal leaves and its tufted habit, and also by its habitat preference. According to Kral (1983: 84), it is "most frequent in boggy sites or acidic openings in the titi dominated woods along streams, is on wet peaty or silty sandy substrates that are frequently flooded." The species is listed as threatened in Florida (Florida Administrative Code, chapter 5B–40, 2000).

Representative specimens. U.S.A. **Florida:** Bay Co., between Sand Creek Road and Mule Creek, ca. 8.5 air mi. ESE of Callaway, 9 May 1995, *Anderson 15473* (FSU, USF). **Mississippi:** Rogers Co., Tuxachanie Trail, DeSoto National Forest, 4 May 1974, *Rogers 9537-A* (USF).

Urochloa fusca (Swartz) B. F. Hansen & Wunderlin, comb. nov. Basionym: *Panicum fuscum* Swartz, Prodr. 23. 1788. TYPE: Jamaica. *Swartz s.n.* (types, S not seen).

Urochloa fusca (Swartz) B. F. Hansen & Wunderlin var. **reticulata** (Torrey) B. F. Hansen & Wunderlin, comb. nov. Basionym: *Panicum reticulatum* Torrey, in Marcy, Explor. Red River Louisiana. 299. 1853. *Panicum fasciculatum* var. *reticulatum* (Torrey) Beal, Grasses N. Amer. 2: 117. 1896. *Panicum fuscum* var. *reticulatum* (Torrey) Lamson-Scribner & Merrill, U.S.D.A. Div. Agrost. Circ. 32: 4. 1901. *Brachiaria fasciculata* var. *reticulata* (Torrey) Vickery, Contr. New South Wales Natl. Herb. 4: 250. 1972. TYPE: U.S.A. Texas: main fork of Red River, 3 July 1852, *Marcy Exped. s.n.* (holotype, NY; isotypes, COLO, NY, US-80956 (fragment ex NY)).

The citation of the type of *Panicum reticulatum* Torrey is taken from the on-line Catalogue of New World Grasses (http://mobot.mobot.org/W3T/Search/nwgc.html) where, however, G. G. Shumard is cited as collector. For the two specimens at NY (fide The New York Botanical Garden Vascular Plant Type Catalog [http://www.nybg.org/bsci/hcol/vasc/tflow.html]), R. B. Marcy is given as the collector. Shumard was a geologist on the Marcy Expedition who specialized in fossils (Ewan & Ewan, 1981). Further historical research is necessary to know whether he should be credited with the plant collections from that expedition.

Webster (1987: 235) used the name *Urochloa fasciculata* var. *reticulata* but failed to cite the basionym for either epithet, and thus the combination was invalid. That combination is further untenable because *Panicum fasciculatum* Swartz (Prodr. 23. 1788) cannot be transferred into *Urochloa* due to the existence of *Urochloa fasciculata* Kunth (Enum. Pl. 1: 31. 1833). Therefore, the epithet next in priority must be adopted. Hitchcock and Chase (1951), in the synonymy of *Panicum fasciculatum*, cited three further Swartz names: *Panicum carthaginense* (Prodr. 22. 1788), *P. flavescens* (Prodr. 23. 1788), and *P. fuscum* (Prodr. 23. 1788), all of equal priority. The choice here of *Panicum fuscum* establishes its priority (ICBN, Art. 11.5: Greuter et al., 2000) over the other two names. Full synonymy for the species may be found in Hitchcock and Chase (1951: 916), under *Panicum fasciculatum*.

Representative specimens. U.S.A. **Florida:** Collier Co., Marco Island, vicinity of Marco Pass, 1 May 1965, *Lakela 28526* (USF); Lee Co., Mound Key, Estero Bay, 13 July 1974, *Todd 144* (USF); Volusia Co., 0.4 mi. W of Rte. 3, 8.8 mi. N of Haulover Canal, northern Merritt Island, 24 May 1975, *Shuey s.n.* (USF).

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